

August 3, 2014

MEMORANDUM

To: Sandra Lyon, SMMUSD Superintendent

From: ENVIRON International Corporation

Re: **Summary of Pre- and Post-Cleaning Polychlorinated Biphenyls (PCBs) Results for MHS Building E (Blue Shark)**

This report is submitted to the Santa Monica-Malibu Unified School District (SMMUSD or District) to summarize the preliminary¹ results from pre- and post-cleaning sampling at Malibu High School (MHS), Building E (Blue Shark). This report also provides initial conclusions from the data pending a building-specific report summarizing inspection observations, sampling locations and results, and conclusions after receiving all validated data, as discussed in our [July 25, 2014 update](#) to the District.

Executive Summary

The results show that PCB concentrations in all air and wipe samples taken in 12 regularly occupied rooms in Building E (Blue Shark) are lower than EPA's acceptable exposure levels both before and after BMP cleaning.² Since pre-cleaning sampling values were below USEPA thresholds, the results would indicate that BMP cleaning was not needed to address any residual PCB concentrations. Despite these results, the District proceeded with BMP cleaning of this building, and post-BMP cleaning testing indicates that no additional BMP cleaning in the regularly occupied rooms of Building E (Blue Shark) is needed per the July 3rd MHS Specific Plan³:

- Based on review of all preliminary¹ air sample results, the results for MHS Building E show that all (24 samples) airborne levels of PCBs in the sampled rooms with reported results to date² are either not detected or below USEPA's recommended health-based benchmark of 200 ng/m³ including samples taken both before and after the BMP cleaning of these areas.
- Based on review of all preliminary¹ surface wipe sample results in the regularly occupied rooms of Building E, PCB concentrations in all (87 samples) surface wipe samples are below USEPA's recommended threshold of 1 µg/100 cm² both before and after BMP cleaning. ENVIRON understands that the District will clean several low-occupancy rooms in Building E before these areas are routinely accessed.⁴
- One of the objectives of the Air and Wipe Sampling Pilot Study on BMPs, as described in the [July 3rd MHS Specific Plan](#) (Section 1.2.3 and associated Appendix D), is to evaluate if PCB

¹ Data are undergoing Level III/IV third party data validation, as described in the USEPA Contract Laboratory Program National Functional Guidelines (USEPA 2008).

² Post-cleaning air samples collected from Room 14 (faculty workroom/student center) and Room 18 (electrical room) are still pending as they were taken several days later than the samples reported here. PCBs were not detected in the pre-cleaning air sample in Room 14. Based on the data trends observed to date and the pre-cleaning result for Room 14, it is not expected that post-cleaning results in this room would exceed the USEPA benchmark. Room 18 is not included in this count as it is a low occupancy room; Room 18 was not sampled prior to BMP cleaning.

³ 2014. *Site-Specific PCB-Related Building Materials Management, Characterization and Remediation Plan for the Library and Building E Rooms 1, 5, and 8 at Malibu High School*. Prepared for SMMUSD by ENVIRON. July 3. [Accessed here.](#)

⁴ The low occupancy rooms that will be cleaned by the District include rooms 15, 17, and 20.

concentrations had significantly changed in air and dust in the classrooms since the December 2013 cleaning, with the goal of using the information from the pilot study to evaluate future cleaning frequency.

- Classrooms in Building E were cleaned during December 2013, thus all Building E classrooms (all 10 classrooms) were included in the testing program for the pilot study.
- PCBs were not detected in any of the 31 wipe samples analyzed prior to BMP cleaning. Further, PCBs were not detected in 11 of 12 pre-BMP cleaning air samples; one air sample had a detection near the detection limits.
- These results indicate that PCB-containing dust has not accumulated in these classrooms since the last thorough cleaning in December 2013, approximately 7 months ago. In addition, air results remain well below USEPA health-based benchmarks. Collectively, the results demonstrate that once removed, historic dust accumulations do not return when routine BMP cleaning practices are employed.

Further information on the above-presented results is provided in the remainder of this memorandum.

Additional Information on Preliminary Findings

BMPs – Annual Cleaning for Building E (Blue Shark)

- Annual HVAC cleaning has been completed by the District's contractor.
- Annual BMP cleaning of all regularly occupied rooms has been completed by District staff.⁴

BMPs – Air and Wipe Sampling MHS Pilot Study on BMPs for Building E (Blue Shark)

- Preliminary review and analysis of all air sample results¹ collected prior to and after BMP cleaning (with a greater number of post-BMP samples taken per the sampling protocol as indicated in the table below) indicates that **all** airborne levels of PCBs in the sampled rooms are either not detected or are below USEPA's recommended health-based benchmark of 200 ng/m³.

Preliminary¹ Air Sampling Results To Date					
Building	BMP Cleaning	Number of Indoor Samples	Not Detected⁵	Detected and Below 200 ng/m³	Above 200 ng/m³
Building E (Blue Shark)	Pre-BMP	12	11	1 (82 ng/m ³)	None
	Post-BMP	14(includes 1 duplicate) ^{6,7}	10	2 (maximum: 84 ng/m ³)	None

⁵ The method reporting limit for air samples in Building E ranged from 64 ng/m³ to 73 ng/m³.

⁶ Duplicate samples are collected adjacent to the original sample. Replicate samples are collected in the same location as the original sample, after the original sample is collected and are applicable to wipe samples only.

⁷ Sample count includes two rooms (Room 14 and Room 18) that were sampled but laboratory results are still pending.

- Preliminary review and analysis of all BMP surface wipe sample results¹ in Building E indicates that PCBs were not detected in 100 percent (%) of pre-BMP and approximately 95% of post-BMP samples (note that a greater number of post-BMP samples were taken as indicated in the table below). **All** surface wipe sample results were either not detected or are below USEPA's recommended health-based threshold.
- No post-cleaning results required further actions in accordance with Appendix D of the July 3rd MHS Specific Plan.

Preliminary¹ Surface Wipe Sampling Results To Date					
Building	BMP Cleaning	Number of Samples	Not Detected⁸	Detected and Below 1 µg/100 cm²	Above 1 µg/100 cm²
Building E (Blue Shark)	Pre-BMP	31 (includes 1 duplicate and 2 replicates)	31	None	None
	Post-BMP	56 (includes 3 duplicates and 1 replicate) ⁴	53	3 (max: 0.74 µg/100 cm ²)	None

⁸ The method reporting limit for surface wipe samples is 0.10 µg/100cm².